

THE ECHINODERM NEWSLETTER

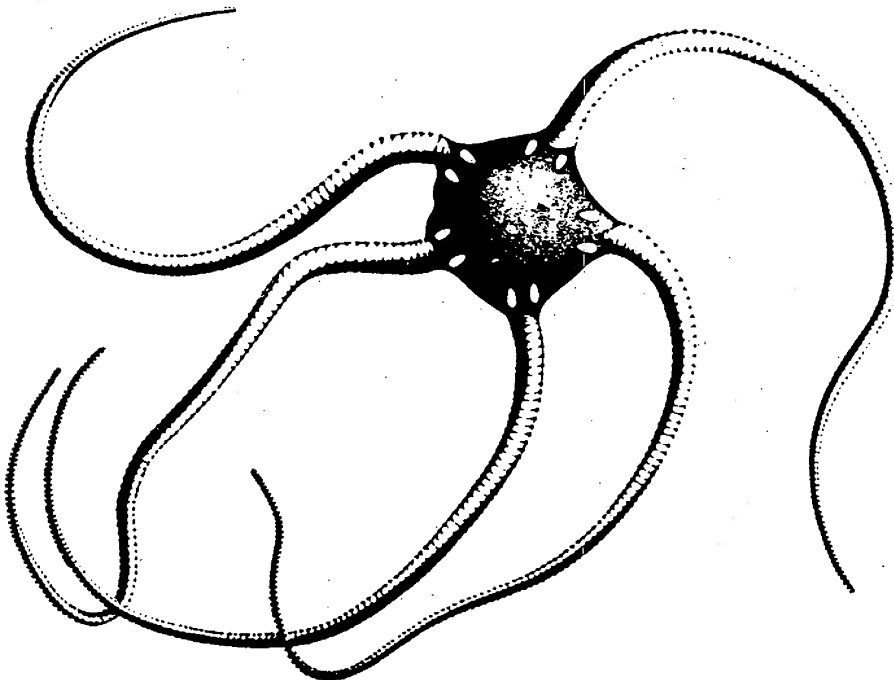
Number 15, July 1986

Editor: John Lawrence
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University of South Florida
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Distributed by the Department of Invertebrate Zoology
National Museum of Natural History
Smithsonian Institution
Washington, D.C. 20560, U. S. A.
(David Pawson, Maureen Downey)

The newsletter generally contains information concerning meetings and conferences and publications of interest to echinoderm biologists, titles of theses on echinoderms, and research interests and addresses of echinoderm biologists. The last page of this newsletter is a form which can be sent to the editor by individuals who desire to be added to the list of echinoderm specialists published in the newsletter.

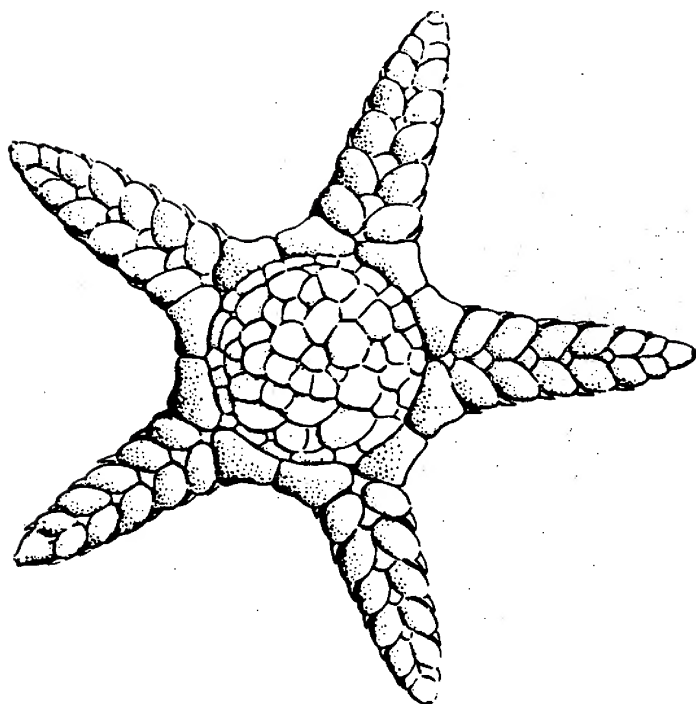
The newsletter is not intended to be a part of the scientific literature and should not be cited, abstracted, or reprinted as a published document.



*Pectinura
conspicua*
(from Koehler 1904)

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Ophiuraster perissus
(from H.L. Clark 1939)

MEETINGS

1

5ème Seminaire International des Echinodermes
22-25 September 1986
Nantes, France

Organizer: Catherine Cuenca
Museum d'Histoire Naturelle
12, rue Voltaire, 44000 Nantes, France

Phylogeny and Evolutionary Biology of Echinoderms
15 to 17 December 1986
London, England

Organizer: A.B. Smith
Department of Palaeontology
British Museum (Nat. Hist.)
Cromwell Road, London SW7 5BD, U.K.

International Echinoderm Conference

First Announcement



International Echinoderm Conference August 23 - 28, 1987

University of Victoria, Victoria, British Columbia CANADA

For Information on the
Scientific Program,
Contact the Chairman
of the Organizing Committee
Dr. Robert Burke
Department of Biology
University of Victoria
Victoria, B.C., Canada
V8W 2Y2
(604) 721-7105

To Receive Registration
Information Please Contact:
Mary Ransberry
Conference Office
Div. of University Extension
and Community Relations
University of Victoria
Victoria, B.C., Canada
V8W 2Y2
(604) 721-8465
Telex 049 7222 UVic

Information and Requests

addresses are in the list of echinoderm specialists.

VAIL. Reports that an echinoderm department has been established at the Northern Territory Museum, Darwin, Australia. A primary function of the department is to work on the taxonomy and ecological aspects of Indo-West Pacific echinoderms, particularly those of northern Australia. Those with an interest in the echinoderms of the region should correspond with Vail who is the curator of the echinoderm department.

HOGGETT. Is studying systematics of tropical Australian ophiotrichids. Would like to exchange specimens of northern Australian echinoderms for ophiotrichid material from other Indo-Pacific localities.

Is interested in associations with eulimid gastropods.

KRISTAN-TOLLMANN. Is working on Triassic fossils, isolated elements of Echinodermata and on Crinoidea macrofossils.

WAREN. Is studying molluscs parasitic on echinoderms.

JELLETT. Is studying the pathology of echinoderms.

VADET. Is studying Jurassic regular echinoids.

BOULAND. Is interested in the control of echinoderm reproduction.

HIGHSMITH. Published information on ophiuroids living in cavities of coral heads: Highsmith, R.C. 1981. Coral bioerosion at Enewetak: agents and dynamics. Int. Rev. ges. Hydrobiol. 66: 335-375.

J.S. MILLER. Would like to know the location of the particularly fine lily encrinite figured by Knorr. Notes that it is said to have been purchased from the labourers at the limestone quarry at Schrapland, near Halle, by Inspector Wilkens, for 32 groschin, and given to Professor Lange, who sold it to Baron Niegart. However, it is also stated that it was not bought by Wilkins, but by Mr. Vitigo, at Farrenstadt, near Querfurt, for two dollars, and given to Lange, who sold it for three louis d'or. Miller says that if his memory does not misgive him, he thinks he saw the specimen about twenty years ago (1801) in the collection of the Naturforschenden Gesellschaft, at Dantzic. He asks: "Where is it now?"

KYTE. Is studying disease in *Pisaster ochraceus* and *Solaster stimpsoni* in Puget sound. Is interesting in corresponding with others working with asteroid diseases.

LEWIS, RD. Requests information and reprints on taphonomy of crinoids and ophiuroids.

STRATHMANN. Is working with the *Henricia* species of the northeast Pacific.

WRIGHT, C.W. & A.B. SMITH are preparing a monograph on the British Cretaceous echinoids as a revision of T. Wright's 1864-1882 monograph

JANGOUX M. requests information on the role of bacteria in echinoderms.

BROERTJES: DE WAARD are interested in immunology of echinoderms.

COBB, J.L.W., & A. MOORE are interested in echinoderm neurophysiology.

MEYER, DL. is interested in taphonomy, particularly of crinoids and edrioasteroids.

CASTILLA, JC. has a particular interest in the genus *Heliaster* along the Pacific coast.

GREEN, JJ. is studying middle Silurian camerate crinoids

CASO, ME is completing a monograph, Los equinodermos de la Bahia de MAZATLAN. Has a paper in press describing a new species of *Ophioderma* and another concerning the echinoderms collected during oceanographic campaigns.

HAMMOND, L is collating reports, photographs, observations etc. of holothuroid/sponge associations. Would like to receive any information available. Is continuing to work on holothuroid and other echinoderm deposit feeders, and on aggregations and reproduction in asteroids.

CLEMENT C R. is interested in ontogeny of crinoids, is studying rhombiferans, diploporitans.

MC CURDA, WATERS, and HOROWITZ are preparing a review of the blastoid genus Pentremites and can offer identifications of specimens. Specimens should be sent to Horowitz. Their general reviews of evolution in Pentremites, taxonomic survivorship in the Blastoidea, and a revision of the family Pentremitidae have been published. They are continuing work on a text of a monographic review of the genus Pentremites. Horowitz is considering preparing an index and bibliography of blastoids to extend the one published in 1943 by Bassler and Moodey. He would appreciate receiving appropriate reprints from blastoid workers.

BOCZAROWSKI is studying echinoderm fossils of the Middle Triassic from Upper Silesia (South Poland) and holothuroids from the Devonian of central Poland. He seeks reprints on fossil and recent holothuroids (paleontology, biology, paleoecology, ecology, systematics, anatomy, functional morphology, and evolution.

MACZYNSKA is studying the Upper Cretaceous and Tertiary (Miocene) echinoids.

MARTIN RE is studying echinoderms associated with marine turtles

AUSICH is studying the evolutionary biogeography of the Middle Silurian crinoid fauna, the palaeoecology of Middle Mississippian crinoids.

CLARK, AM. from June 1986, correspondence relating to curatorial aspects of the British Museum (Nat. Hist.) echinoderm collections should be directed to Gordon Paterson. Non-urgent mail is better directed to the address given in this newsletter.

MOORE A. is studying neurophysiology of echinoderms.

FUJITA T is interested in the ecology of deep-sea ophiuroids

STEPHENSON, DG requests information on Tertiary crinoids (particularly Tethys area) for taxonomy.

YAKOLEV YM is studying regeneration of the holothuroid reproductive system

JABLONSKI. Is interested in the evolution and biogeography of Mesozoic-Cenozoic-Recent echinoids and crinoids.

JELLETT. Is interested in the pathology of echinoderms.

MARSHALL. Is interested in genome structure; is establishing a library of DNAs of Clypeasteroids and close relatives (for DNA-DNA hybridization studies); desires live specimens/spermatozoa/DNA of clypeasteroids and close relatives

PROKOP. Is interested in cystoids and biostratigraphy.

GRYGIER. is interested in parasitology (Ascothoracida and Myzostomida). Asks that those who dissect echinoderms look for parasites. Is interested in new records of Ascothoracida from echinoderms; also in Myzostomida (especially from non-crinoid echinoderms). Has an interest also in parasitic copepods that are highly modified.

"I've got a little list" or "Isn't that a specimen of
Lhuyd's Latticed Seastar?"

by David L. Pawson

The Committee for Common and Scientific Names of Invertebrates (CCSNI) of the American Fisheries Society (AFS) has as its main purpose the preparation and publication of authoritative lists of common and scientific names of aquatic invertebrates. Lists of decapod crustaceans and mollusks have been prepared, and are going to press.

I have been asked to lead a group of specialists in the preparation of a list of echinoderm names for the American continent north of Mexico, within 200 miles of the coastal margin (to a depth of approximately 200 meters), including coastal islands, but excluding the West Indies.

I am not sure exactly how difficult this all will be; there are surely more than 1,000 species-names involved. Apparently, typical entries in the finished list will look something like this:

Flagrante delicto (Hendler, 1999) . . A . . . The fun star of Uconn
Lawrencia jangouxii (Anon, 1999) A . . . The star of Balkema
Chrispaulia andrewsmithi (Britmus, 1999) . A . The theoretical star

(In the above entries, the letters "A" and "P" stand for Atlantic and Pacific).

If you are willing to help with this project in any way, or if you have species lists or faunal lists that might be available for reference purposes, please write to me soon (Room W323, National Museum of Natural History, Smithsonian Institution, Washington D.C. 20560). Many thanks.

COURSE OFFERING IN ECHINODERMS

The following course will be offered at Bamfield Marine Station in conjunction with the 1987 International Echinoderm Conference in Victoria, Canada.

Advanced Special Topics: Biology of Echinoderms

An advanced course on the systematics, ecology, functional morphology, physiology and life histories of the Echinodermata. Living local populations will be emphasized through field and laboratory studies.

The course will include both class and independent research projects. The use of SCUBA is encouraged for those who can satisfy the Bamfield Marine Station diving regulations. During the final week of the course, students have the option of either attending the Echinoderm Conference in Victoria or undertaking an additional special project at Bamfield.

- Dates: Approx. July 20 through August 28, 1987 (6 weeks)
- Prerequisites: Graduate or qualified senior undergraduate standing.
- Location: The Bamfield Marine Station is a research and teaching facility operated jointly by five Canadian Universities. It is located on the west coast of Vancouver Island about 3 1/2 hours driving time from the Echinoderm Conference site at the University of Victoria.
- Fees: To be determined; they will not include conference costs. Bursaries may be available based on need and qualifications.
- Instructors: Dr. Maria Byrne, University College Galway, Ireland
Dr. William C. Austin, Khoyatan Marine Laboratory,
Cowichan Bay, British Columbia
Dr. John S. Pearce, University of California, Santa Cruz, California.

INQUIRIES

Director
Bamfield Marine Station
Bamfield, British Columbia, Canada
VOR 1B0
Telephone: (604) 728-3301

AN ECHINODERM SOCIETY?

For a number of years, an echinoderm society has been proposed. Although we have enjoyed the freedom associated with the lack of a society we have not enjoyed benefits that a society provides. The topic will be discussed at the Victoria conference.

FRIENDS OF ECHINODERMS: Will convene at the Annual Meeting of the American Society of Zoologists, 27 December 1986, Nashville

Disposal of reprint collections

Many of us have gathered together large collections of echinoderm reprints, sometimes supported by card indices or computer-based retrieval systems. Because collections can rarely be accepted nowadays by libraries, however specialized, the saleable portions are often dispersed of through secondhand booksellers following retirement or death.

Considerable effort has often gone into the curation of such collections, and some workers may well prefer to see them passed gratis to a younger worker just starting out. In this way the collection and its data base can be kept together, and hopefully continue in use for many more years.

Have colleagues any suggestions as to how contacts can best be made?

David Nichols
Department of Biological Sciences
Hatherly Laboratories
Prince of Wales Road
EXETER EX 4 4PS
U.K.

Directory of Palaeontologists of the World

The fifth edition is planned for the 28th Congress of the International Palaeontological Association (July 1989, Washington, D.C.). Names, addresses, and affiliations should be sent to Dr. Rex Doescher, Dept. of Paleobiology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560.

Shallow-water hydrothermal vents in the Kuril Islands

Members of the Institute of Marine Biology of the Far East Science Center of the USSR (Vladivostok) discovered shallow-water hydrothermal vents in the summer of 1985. An account of their observations can be found in: Tarasov, V.G., M.V. Propp, L.M. Propp, S.V. Blinov, and G.M. Kamonov. 1986. Shallow hydrothermal vents and a unique ecosystem of Kraternaya caldera. Mar. Biol. (Vlad.). (2), 72-74.

The vents occur between the intertidal and 20-m depth. Bacterial mats cover the surface. Sulfide and reduced sulfur compounds are found in the water. Asteroids, echinoids, and holothuroids are present.

(A portion of this commentary by Peter Voogt was omitted in Newsletter 14. The entire text is given here.)

RESEARCH: SOLITARY OR JOINT EFFORT?

The last two decades have shown an explosive increase of the number of papers on echinoderms. Moreover, also the number of investigators working on echinoderms and that of topics studied have increased. This expansion of echinoderm research, resulting in a strong increase of data, has caused loss of overview for most investigators. However, a number of them, particularly those studying typically molecular aspects do not need or want this overview. This holds good also for a second category of investigators, who are primarily process-interested: they study basic processes (such as oocyte maturation or spermatogenesis) and just use echinoderms as well-suited test objects. These cell biologists fit in their results into the data known from other species and can arrive at a good integration of knowledge. Besides there is a third category of scientists who are interested in echinoderms per se. They, for example, do not study the process of reproduction as such, but reproduction of echinoderms; more generally processes in which the total animal is involved. This organismal physiology requires an integration of knowledge on several levels as morphology, metabolism, interorgan transport, and regulation by external or internal factors.

However, this integration has gradually become nearly impossible, which is clearly illustrated by the fact that twenty years ago the larger part of our knowledge on echinoderm physiology could be collected in one book ("The Physiology of Echinodermata", Boolootian, R.A., ed.). An update of this book would yield now a multivolume work, each volume dealing with one topic as has been done for nutrition in "Echinoderm nutrition", edited by M. Jangoux and J.M. Lawrence.

This development has made scientists increasingly dependent on reviews and summarizing lectures during conferences. In this respect the International Conferences on Echinoderms have provided for clearly existing needs.

Further, scientists are more and more conscious of the "tight junction" between morphology and physiology. Morphology should extrapolate towards function, and explanations of observed phenomena in physiology should be based also on morphological features. However, most scientists are trained in only one of the two ways of approach. Therefore they like to present their work to a forum of colleagues with expertise in the same, adjacent or complementary fields of research. The International Conferences on Echinoderms have fulfilled this informing and also accounting function. The increasing number of attendants clearly shows the need for information and consultation, but unfortunately made it necessary to assemble in parallel session.

Yet it remains a pity that only work that already has been done is presented, so that criticism of the work or valuable advices are too late.

Also the tendencies of decreasing average numbers of workers in a research-team (as a result of the worldwide economic recession) and of the increasing requirements in subsequent evaluations of research, force scientists to plan their research carefully. Duplications should be avoided and advices of colleagues should be obtained during the design of experiments.

These considerations result in a plea for adding to the functions of the International Conferences on Echinoderms at least an extra one, namely that of being starting point and, figuratively spoken, uterus for well-planned research projects. In these projects other research groups could participate in doing those parts of the work for which their special expertise is needed, or by planning and performing interrelated experiments. This will greatly stimulate the contacts between investigators and research-teams, resulting in exchange of ideas and techniques, and in stages in each others lab. It will also lead to higher efficiency in research, a well-structured gathering of data with an increase of integrated knowledge.

Furthermore several foundations highly appreciate collaboration in research and are willing to subsidize such projects.

Finally I would like to adstruct this with an example: From the Brussels echinoderm colloquium on, there has been an intensive collaboration between the lab of Dr. Ch.W. Walker, University of New Hampshire, and my lab. This included several visits of workers of these labs to each other (made possible by a NATO grant) and resulted among others in two Ph.D. theses. In one of these theses Dr. F. Smith, New Hampshire University, postulated an interesting hypothesis: Reproduction in male starfish is triggered by environmental conditions (for example photoperiod), this signal is integrated in the nervous system and leads to the release of (a) neurohormone(s), which influence(s) steroid metabolism: changes in steroid levels affect polyamine metabolism and these polyamines control gonocyte mitosis.

This is an attractive hypothesis, with several steps each of which can be tested. However, who or which research-group is able to do this? Yet we know that to the regular attendants of the Echinoderm Conferences belong scientists which are experts on photoperiodicity, or anatomy and morphology of the nervous system. There certainly are attendants which are able to examine the nervous system for neurohormones (it is too bad, that twenty years after the discovery of GSS we still have no idea about other neurohormones in echinoderms!), there are others who can study steroids and polyamines and their effects on metabolism.

Only by forming bipartite or tripartite collaboration groups such an hypothesis can be tested. Of course this was only one example, but it clearly illustrates the present state of research.

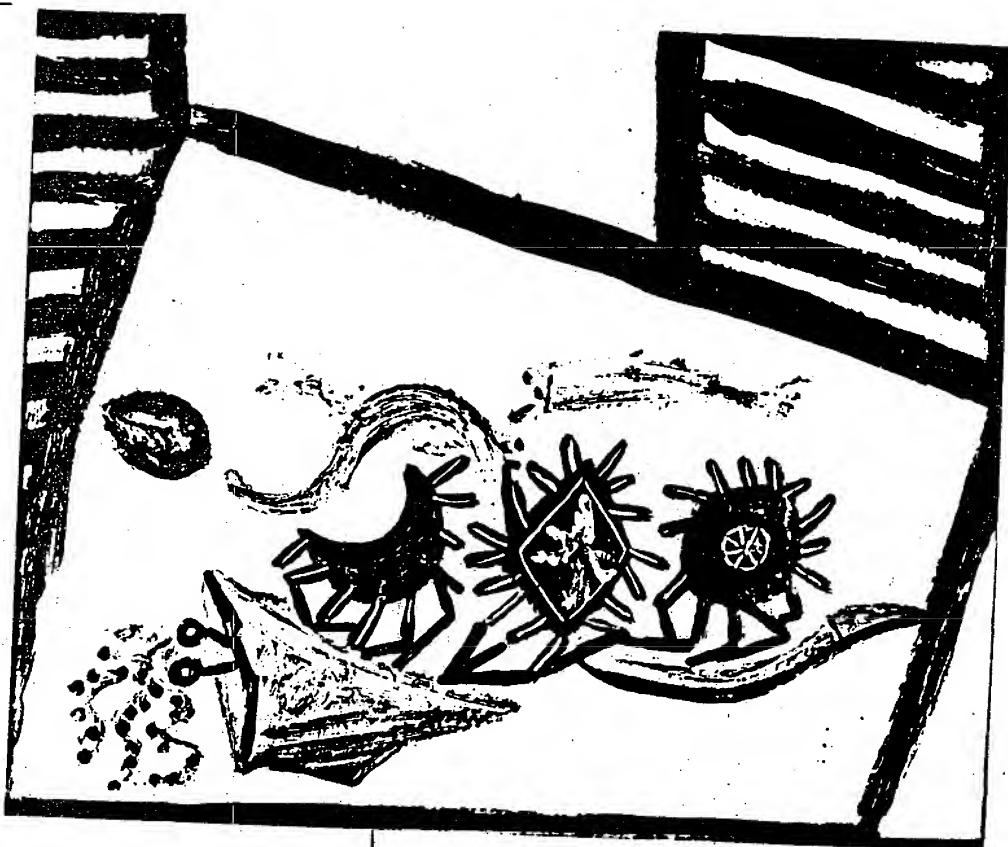
Maybe a coordinating function on behalf of the "International Conferences on Echinoderms" (which is not a Society) will be very helpful to reach to what is my conclusion: Research today will be effective only by a joint effort!

Dr. Peter A. Voogt
Utrecht
The Netherlands

AILSA'S SECTION

Echinoderms in Art

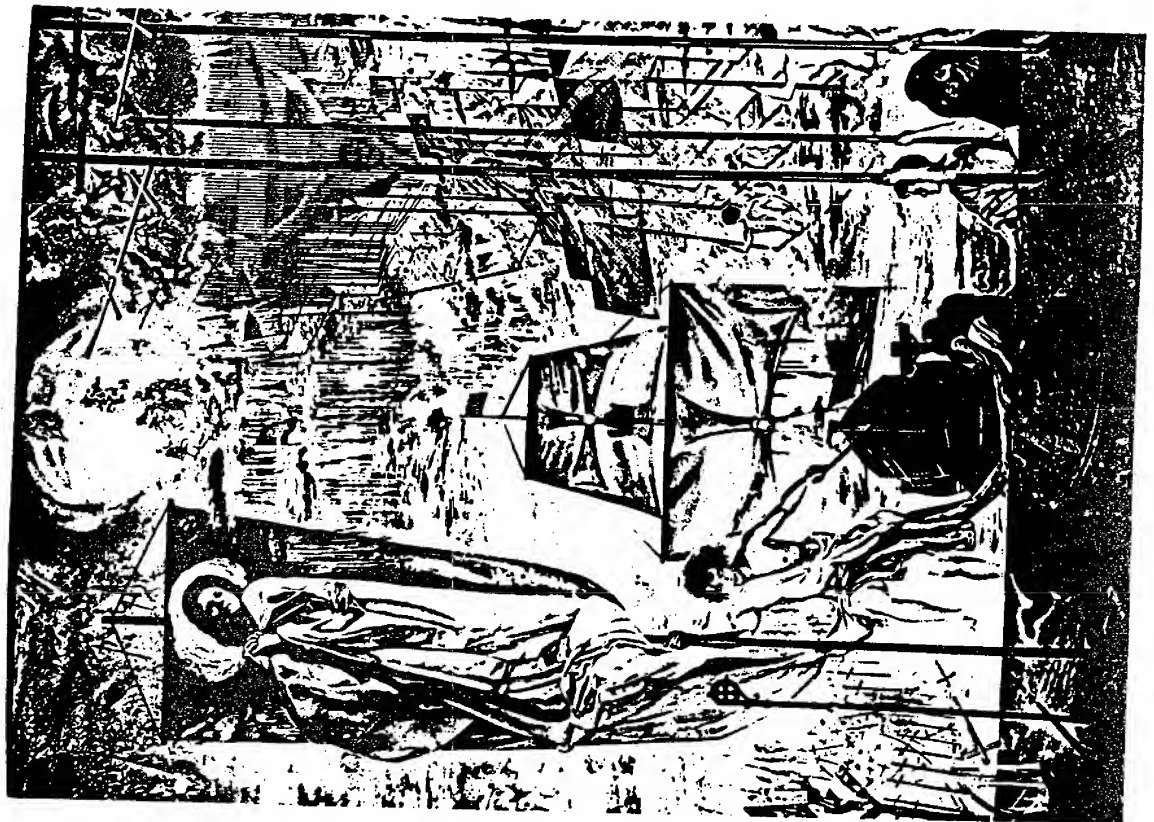
Picasso 1946
 "Fruits de mer"
 Antibes-(Alpes-
 Maritimes)
 (communicated
 by L. Fenaux)



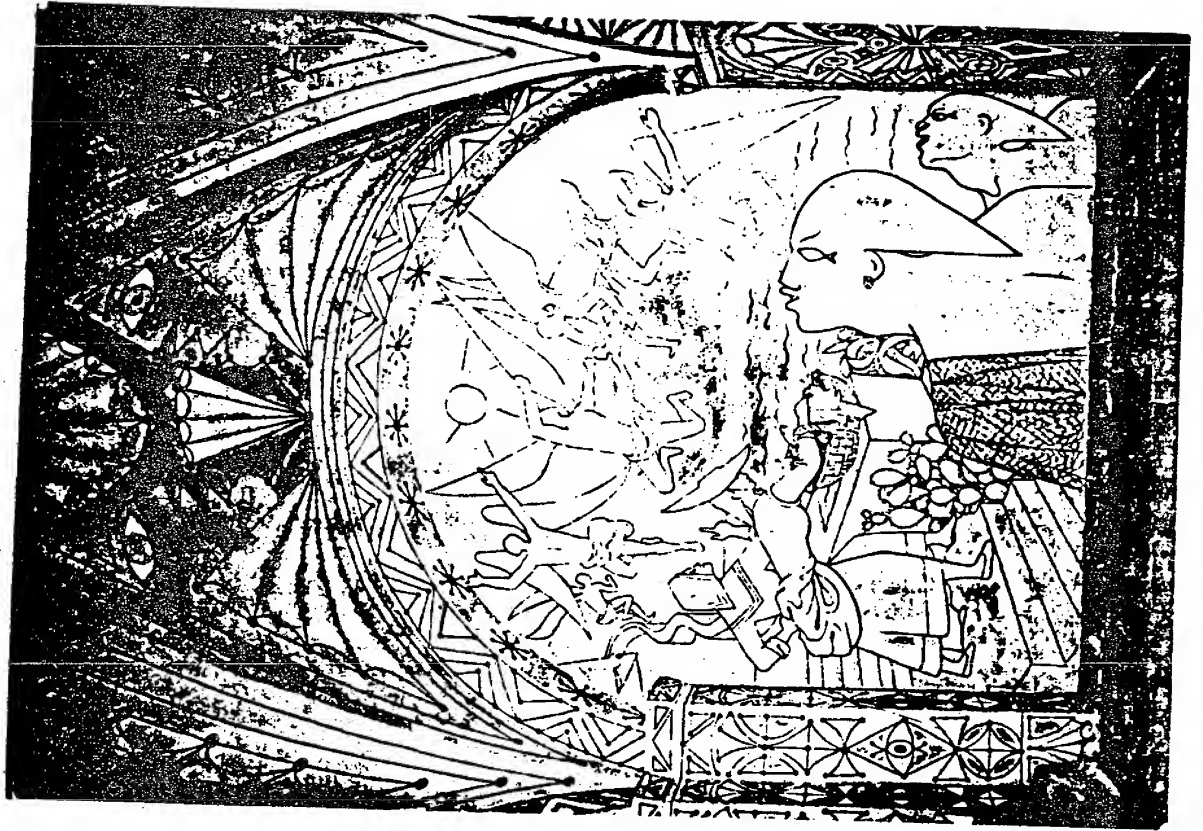
Picasso

"Hibou,
 Chaise et Oursins dans
 un panier"
 Musee Picasso, Antibes.
 (communicated by
 L. Fenaux)

Salvatore Dali
 "La Découverte de l'Amérique par
 Christophe Colomb"
 Dali Museum, St. Petersburg



Jean Cocteau
 "Hommage aux demoiselles
 de Villefranche"
 Chapelle Saint-Pierre,
 Villefranche-sur-Mer.



"As a curious and beautiful creature he (Echinus) is full of interest, and as an adjunct to one's diet he is, in due season, full of excellent meat. We take the ugly and forbidding oyster with words of gratitude and flattery on our lips, and why pass with disrespect the creature that is beautiful and wonderful as well as savoury? To enjoy it to perfection, extricate the creature from his lurking place far down in the blue crevice of the coral, with a fish-spear. Don't experiment with your fingers. On the gunwale of your boat divest it of its slender black spines, and with a knife fairly divide the spheroid body, and a somewhat nauseous-looking meat is disclosed; but no more objection-able in appearance than the substance of a fully ripe passion fruit. The flavour! Ah, the flavour! It surpasseth the delicate oyster. It hath more of the savour and piquancy of the ocean. It clingeth to the palate and purgeth it of grosser tastes. It recalleth the clean and marvellous creature whose life has been spent in cool coral grottos, among limestone and the salty essences of the pure and sparkling sea, and if you be wise and devout and grateful, you forthwith give praise for the enjoyment of a new and rare sensation." from: E.J. Banfield. The confessions of a beachcomber. Scenes and incidents in the career of an unprofessional beachcomber in tropical Queensland.

contributed by Judge Gooding
19 Highgate Park, St. Michael, Barbados.

"In (*Ophiosphaera insignis* and *Ophiodaphne materna*) ... the supposed young ones (carried over the mouths) are the males. The species-name 'materna' given by Koehler to *Ophiodaphne* is thus not very appropriate, the species, so far from being an affectionate mother nursing its young in a self-sacrificing manner, being a passionate mistress living in continuous close embrace with its male lover, and leaving its brood wholly to take care of itself." Mortensen, T. 1933. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16. LXIII. Dansk naturhistorisk forening. Copenhagen. Videnskabelige Meddeleser. 93, 171-194.

ARGUS NODDED

"A reflexive basis for the reversal of the covering reaction supports the suggestion of a reflexive basis for the covering reaction itself. The functional consequences of covering as proposed by other workers could still be valid, but would not be the casual explanations of the phenomenon."

J.M. Lawrence. 1976. Covering response in sea urchins. *Nature*. 262, 490-491.

cont.

"I interpret the correspondence of the moral size class and the point of zero growth to mean that each area has an 'optimum' size set by local conditions...."

T. Ebert. 1968. Growth rates of the sea urchin *Strongylocentrotus purpuratus* related to food availability and spine abrasion. *Ecology*. 49, 1075-1091.

"...aspects of the spawning activities reported support speculation that echinoderm spawning behavior serves to enchance the dispersal of gametes and to minimize gamete wastage."

G. Hendler & D.L. Meyer. 1982. Ophiuroids flagrante delicto and notes on the spawning behavior of other echinoderms in their natural habitat. *Bull. Mar. Sci.* 32, 600-607.

"Although food grooves can not be easily studied with a cost-benefit approach, the clear delineation of scutellid collecting and transporting systems can. For example, is it biogenetically beneficial for a sand dollar to entirely cover its test with feeding structures...."

J. Ghiold. 1984. Adaptive shifts in clypeasteroid evolution--feeding strategies on the soft-bottom realm. *N. Jb. Geol. Paläont. Abh.* 169, 41-73.

Echinoderms in literature

"It turned out to be called the Starfish Marina. Beer, bait, boats, slips for rent, charter service, guides I was running on the beach one morning. Puss had stepped on a sea urchin in shallow water. She was hobbling ashore, in obvious trouble. Okay, so I got the spines out and brought her over here, and got her heel fixed up. She was...a lot of fun." (John D. McDonald. 1985. *The Lonely Silver Rain*.)

RAPID SPECIATION IN CLYPEASTEROIDS

1985

1986



A daisy of a tale?

This is a tale which began in August, 1985, while Dr. Frank Rowe was visiting the National Museum of New Zealand in Wellington, to examine echinoderm collections for species common to New South Wales (Australia) and New Zealand. Frank also wished to complete, with Dr. Alan Baker, a paper on Tasman Sea echinoids, and discuss with Dr. Helen E.S. Clark, a study she is making of Tasman asteroids. We did achieve those aims but not before stumbling across perhaps the most astounding extant echinoderm yet found!

The 9 specimens of this unusual creature were taken from lumps of wood collected from the sea-floor off New Zealand in 1000-1200 m. Mr. Bruce Marshall (NMNZ) has been making a special study of gastropods living on that substrate. During his examination of waterlogged wood, Bruce was very careful to remove any whole or parts of other animals besides molluscs. These included some interesting echinoderms such as Caymanostella and Ophiambix. Hence the new animal was found by Frank in vials containing Caymanostella. The nick-name "sea daisy" was subsequently coined by Alan because of its general dorsal shape, and to avoid use of unpublished scientific names.

Helen and Alan were in or about at the time of the discovery of the sea-daisies. We all became very excited, to say the least. That we did, indeed have an echinoderm - it had a plated calcite skeleton with asteroid/ophiuroid-like plates on its dorsal surface, it had tube-feet (but these were arranged circumferentially rather than in radiate fashion), and its body was definitely pentamerous - was clear. The significance of the find was, therefore, immediately apparent. Wild ideas ensued. How did the tube-feet become circumferential? What about the wvs? What were its relationships? When the initial excitement died down we started finding other significant structures, including juveniles in the gonads or bursae, velum and associated structures and a hydropore.

Frank recalled an early drawing by David Nichols of what a cyclocystoid might have looked like. We were then struck by the superficial resemblance of our sea-daisy to those fossils. However, more recent interpretations of cyclocystoids by Andrew Smith and Chris Paul have scotched any ideas we might have entertained of a living fossil from that stock! Before we could get much further with our ideas Frank had to return to Sydney. We split the material and Frank took three specimens back with him, two of which were sectioned at Sydney University (with the co-operation of Prof. Don. T. Anderson). Alan and Helen continued to study the skeletal plates and soft parts by dissection. Alan traced the wvs from the hydropore to an internal circumferential ring and had a model made of one of the ring ossicles

on the under side of the animal. Frank, meanwhile, beavered away interpreting the internal anatomy from the sections, finding the external nerve and water ring and the connections to the tube-feet below the ampullae. He also worked on the derivation of the animal's shape, skeletal arrangement and wvs.

In February, 1986, Frank returned to Wellington for final discussions and preparation of a manuscript which was published in Nature (Baker, A.N., Rowe, F.W.E. and Clark, H.E.S. 1986. "A new Class of Echinodermata, based on a new genus and species", Nature, 321, 862-864.

We are now preparing a more detailed account, which will include SEMs of the skeleton, photomicrographs of the histological sections, and an elaboration of our ideas on the derivation, origin and relationships of the Class. We will also discuss the interpretations of the cyclocystoids made by both David Nichols and by Chris Paul and Andrew Smith, in the light of our understanding of Xyloplax. We believe this significant and fortunate find gives us a possible insight into the adaptive morphology of both living and fossil forms. The medusiform shape of Xyloplax would, however, appear to be novel in echinoderms.

None of us ever dreamt that a discovery at this level would come our way. For Frank and Helen, it is fortuitous timing, as it coincides with their 25th anniversary of echinoderm research.

F.W.E. Rowe

Allan Baker

Helen E.S. Clark



Cartoon communicated
by F.W.E. Rowe, From
the Sydney Morning Herald
20 March 1986

Response received to Gordon Hendler's advertisement:

Harlose, Hillerod, Denmark. 19 December 1985

Dear Dr. Hendler: I should like to apply for the post of curator at the Los Angeles County Museum, as advertised recently in the Echinoderm Newsletter. As you can see from my curriculum vitae I have had some experience with the group. The position will enable me to continue my studies of this fascinating group. I have done extensive field work and feel that I could bring another perspective to this study. Recently I have had some rare and privileged insights to the evolution of this group. I am frequently arguing with my colleagues here about evolution so I am well versed in the arguments proposed by fundamentalists. Between ourselves there are a lot of fundamentalists here. As I was saying to Dr. Darwin the other day some of them think that they had a personal stake in this creation bit! I hope you will consider my application and I look forward to hearing from you.

Yours sincerely, (signed) Theodor Mortensen

Name: Ole Theodor Jensen Mortensen

Date of Birth: 22 Feb 1868

Place of Birth: Harlose, Denmark

Education: Fredreriksborg Grammar School 1875 - 1885

University of Copenhagen 1885 - 1890 attaining a degree in
Theology

1895 M.Sc. Zoology

1897 Ph. D.

Employment: Taught at the Institute for the Blind 1890 - 1894.

Zoological Assistant at the Zoological Institute,
Giessen. I worked to Spengel.

Associate, Zoological Laboratory, University of
Copenhagen 1902-1910.

Head of Invertebrate Division 1917-1933.

Researcher, Zoological Museum 1933-1952

Field work: Expedition to the Gulf of Siam 1899-1900

West Indies 1905-1906

Pacific 1914-1916

Indo Malaya 1922, 1929-30.

Publications: I have several publications but I have no wish to bore or appear over-qualified for the post. I shall therefore concentrate on those of greatest merit.

(Unfortunately, Dr. Hendler had already made arrangements to hire a curatorial assistant when this application arrived.)

IN THE PAST

1886

Bell, F.J. On a species of Echinocardium from the Channel Islands. Ann. N. H. (5), 516-517.

Carpenter, P.H. On the variations in the form of the cirri in certain Comatulina. Tr. L.S. ii, 475-480.

Chadwick, H.C. Report on the Ophiuroidea of the L.M.B.C. District. Fauna of Liverpool Bay. i. 140-143.

Cotteau, G. Echinides nouveaux ou peu connus. Bull. Soc. Z. France, xi, 708-728.

Cuénot, L. Sur les fonctions de la glande ovoïde, des corps de Tiedemann et des vésicules chez les Astérides. C.R., cii, 1568-1569.

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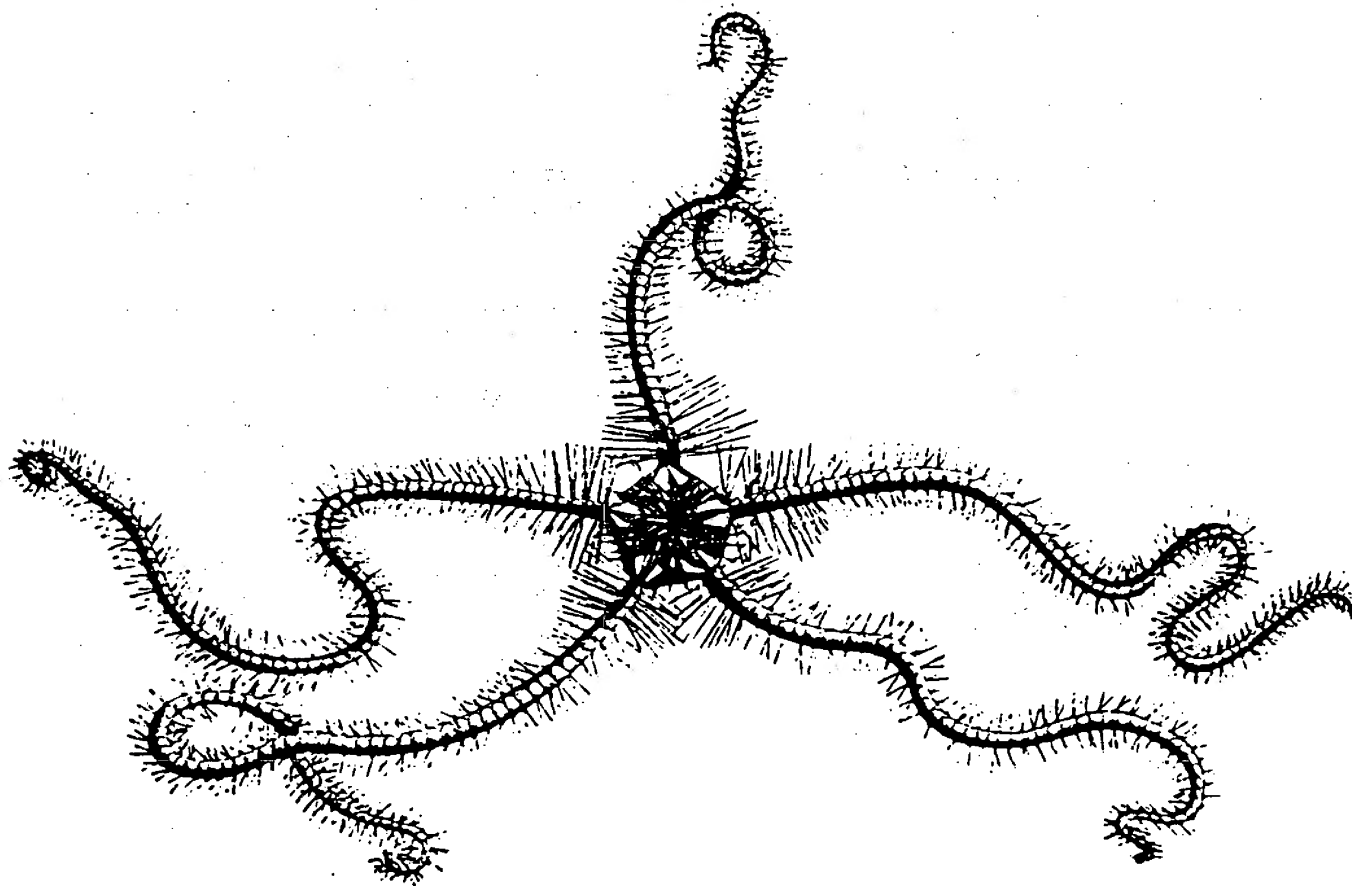
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Over the years Paul Breen and I, in the Department of Fisheries and Oceans, Canada have had various French, Japanese and Soviet echinoderm papers translated. These are available (cost unknown) from:

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Norm Sloan

HOLOTHUROIDS

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Festoon of straight
pedicellariae
from the upper surface
of *Pisaster brevispinus*
(from Fisher 1930)

4^{ème} Séminaire International sur les Echinodermes. 1985
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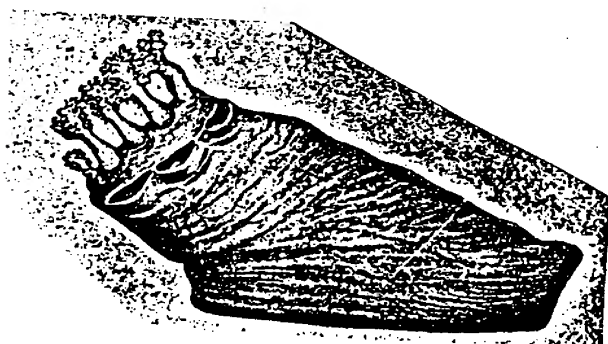
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des tubes de Cuvier chez l'holothurie *Holothuria forskali*.
-



A female *Psolus koehleri*
from a lateral view
showing the openings to
the brood pouches
behind the tentacles
(from Vaney 1914)

Papers presented at the annual meeting of the
Western Society of Naturalists (1985)
(communicated by James B. McClintock)

BARON, CJ. Test failure in sea urchins from four different locations

BAY-SCHMITH, E. Induction and repression of gametogenesis in the sea urchin *Strongylocentrotus purpuratus* by different photoperiod regimes.

BOSCH, I., JS PEARSE. Predominance of pelagic lecithotrophic development among shallow water Antarctic asteroids.

BYRNE, M. The reproductive biology of a species of *Ophionereis* (Echinodermata: Ophiuroidea) that broods its young.

CAMERON, JL. Reproductive periodicity and spawning behavior of the California sea cucumber *Parastichopus californicus* (Stimpson)

COYER, JA, JM ENGLE, RF AMBROSE, BV NELSON. Utilization of purple (*Strongylocentrotus purpuratus*) and red (*S. franciscanus*) urchins as food by the white urchin (*Lytechinus anamesus*) in the field and laboratory.

DAVIS, KK. A study of spermatogenesis and DNA synthesis in teste culture in vitro from the sea star *Patiria miniata*.

DRUEHL, L., P. BREEN. Some ecological effects of harvesting *Macrocystis integrifolia*. (densities of Echinoids and Holothuroids)

DUGGINS, DO. The effects of kelp forests on nearshore environments Biomass, detritus, and altered flow. (echinoids)

EBELING AW, DR LAUR. Kelp forests without sea otters: Effects of storm damage and destructive sea urchin grazing on fish populations.

ESTES, JA, C HARROLD. The influences of sea otter predation on plant/herbivore interactions: some questions of scale. (echinoid)

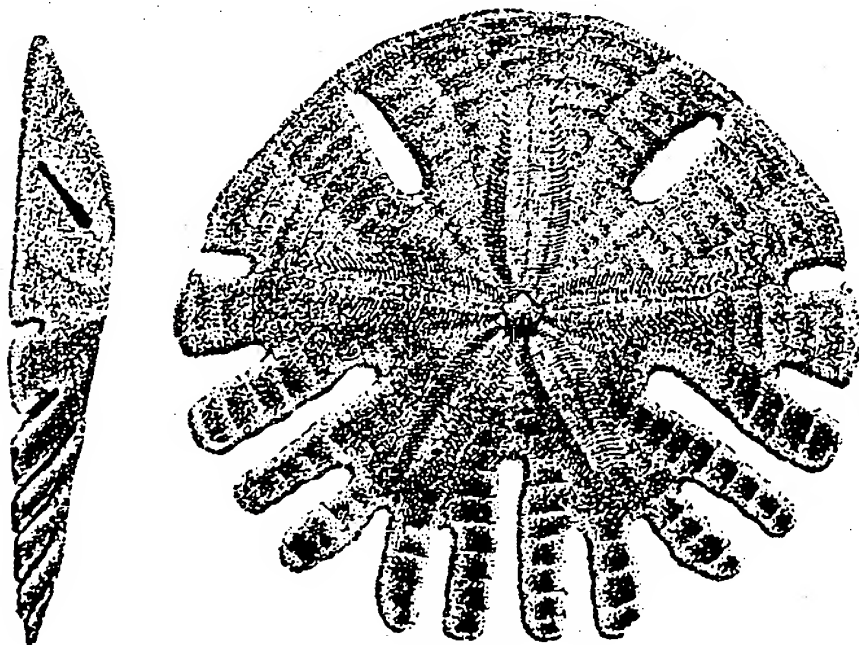
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GOTSHALL. D. *Macrocystis* and fish abundance: does more kelp mean more fish? (echinoids)

GREBMEIER, JM. The influence of oceanographic frontal dynamics on benthic community structure in the NE Bering and SE Chukchi seas. (echinoids)

HAY, ME, K GUSTAUFSO, W FENICAL. Chemical defenses against herbivory in coral reef seaweeds. (echinoids)

- KENNER, M. Ecology of a cryptic population of *Strongylocentrotus purpuratus* inhabiting sublittoral coralline mats.
- LAMBERT, P. A comparative study of west coast *Parastichopus* with a description of a new species.
- LAUR, DR, AW EBELING, D COON. Effects of sea otter foraging in subtidal communities of the central California coast (echinoids)
- MCALARY, FA, J ENGLE. Biogeography of shallow-water asteroids of the California channel islands.
- MCCLINTOCK, JB, JS PEARSE. Organic and energetic content of eggs and juveniles of direct-developing asteroids and echinoids from McMurdo Sound, Antarctica.
- MILLER, RL. A possible sex pheromone in starfishes.
- PENNINGTON, JT, RB EMLET. Ontogenetic and diel vertical migration of a planktonic echinoid larva (*Dendraster excentricus*): occurrence, causes, and probable consequences.
- ROBNETT, TJ, JB MCCLINTOCK, JS PEARSE. Size-selective predation by the asteroid *Pisaster ochraceus* on the bivalve *Mytilus californianus*: a cost-benefit analysis.
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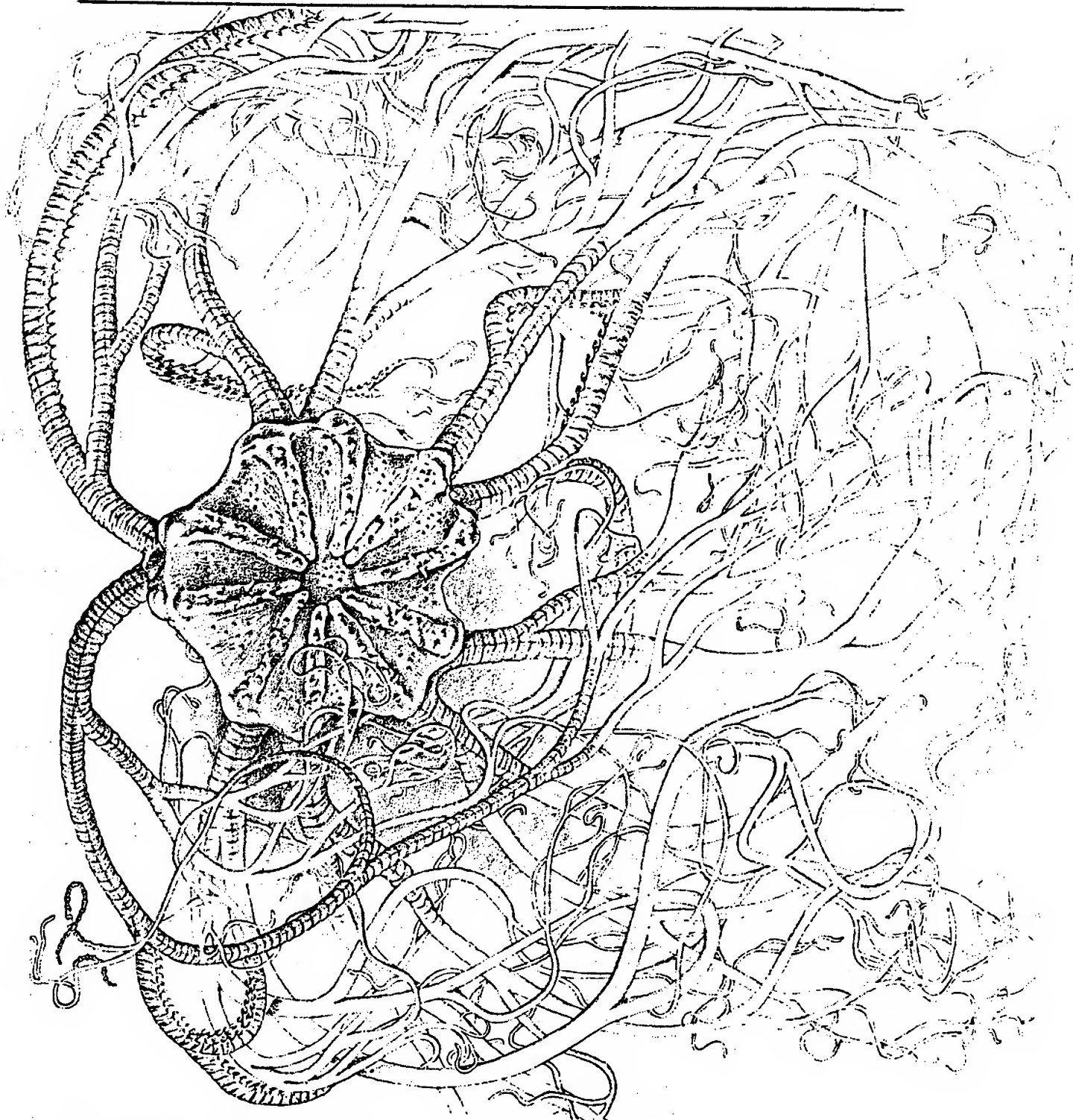


Rotula augusti
(from
L. Agassiz 1841)

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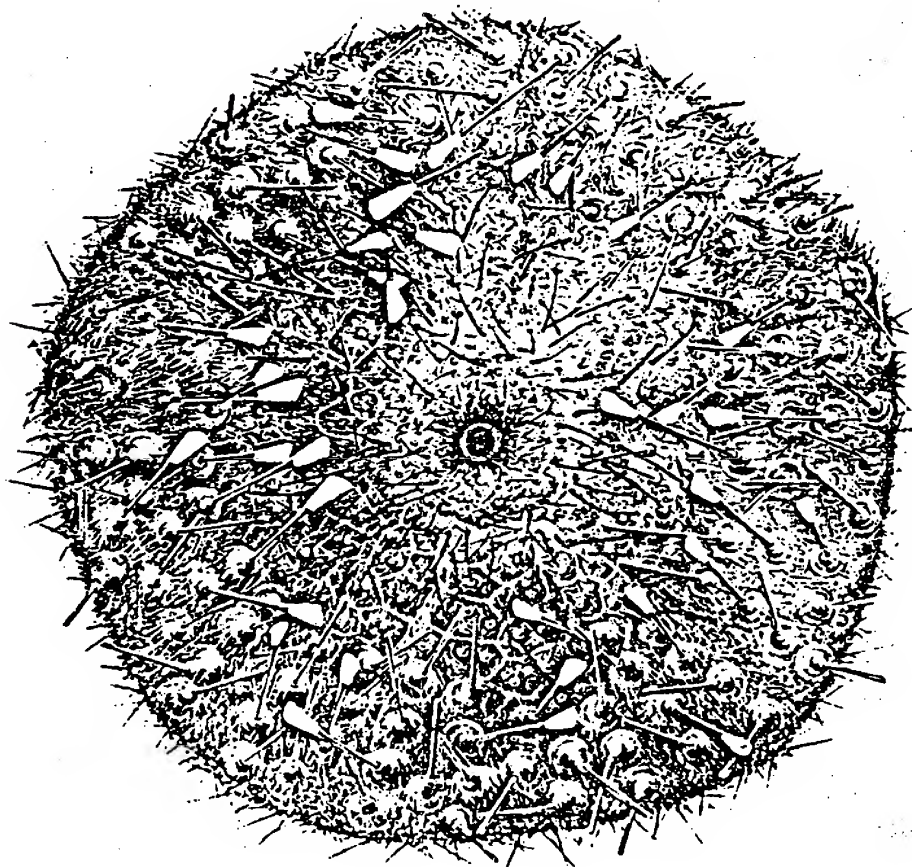
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A list of echinoderm specialists

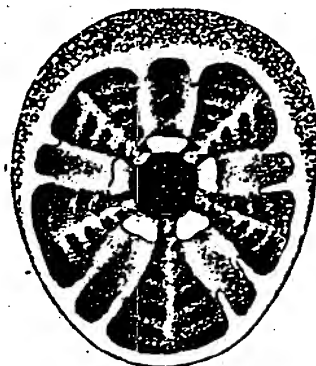
The list in this newsletter provides additions and address changes to the list in Newsletter 14.

Those whose names are not included here and those who have a change of address can use the last page of this newsletter to send the information to the editor.

The last page of the newsletter can also be used to submit requests, information about current research, meetings, publications, suggestions.

Code (areas of interest)

- 1 asteroids
- 2 ophiuroids
- 3 echinoids
- 4 holothuroids
- 5 crinoids
- 6 blastoids
- 7 edrioasteroids
- 8 stylophorans
- 9 paleontology
- 10 ecology
- 11 behavior
- 12 physiology
- 13 biochemistry
- 14 embryology, developmental biology
- 15 systematics
- 16 anatomy
- 17 functional morphology
- 18 reproduction
- 19 larvae
- 20 evolution
- 21 biogeography



Internal buttresses of the test of *Echinocyamus pusillus*
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36849, USA: 3,5,9,10,15,16,17.

- Litvinova, Nina. P.O. Shirshov Institute of Oceanology, Academy of Sciences, Krasikova 23, 117218 Moscow, USSR: 2,10,11,15,17.
- Maczynska, Stefania-Stanislawa. Polish Academy of Sciences, Museum of the Earth, 20-26 Al. Na Skarpie, 00-488 Warsaw, Poland: 3,9,10,15.
- Madsen, Fritz Jensenius. Zoological Museum, Universitetsparken 15, DK 2100, Copenhagen, Denmark: 1,2,15,21.
- Marsh, Loissette M. Western Australian Museum, Francis Street, Perth, Western Australia, 6000, Australia: 1,2,3,4,5,10,15,21.
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- Roman, Jean Paul. Museum national d'Histoire naturelle, Institut de
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- Sastry, D.R.K. Zoological Survey of India, 27 Jawaharlal Nehru Road,
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- Schuhmacher, H. Universitat Essen GHS, FB 9 - Hydrobiologie,
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- Serafy, D. Keith. Southampton College of Long Island Univ., Dept. of
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- Showman, Richard M. University of South Carolina, Dept. of Biology,
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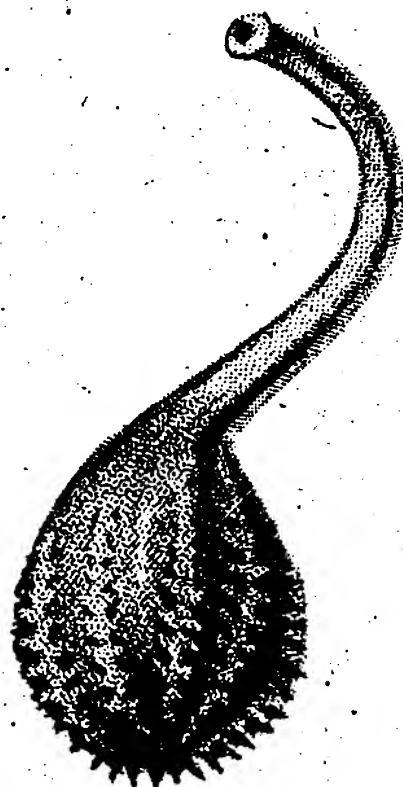
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Rhopalodina
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Taxonomic group(s) of particular interest (please check)

- ☐ Asteroids
☐ Ophiuroids
☐ Echinoids
☐ Holothuroids
☐ Crinoids
☐ Blastoids
☐ Edrioasteroids
☐ Stylophorans
☐ other extinct classes (indicate) _____
 orders (indicate) _____
 families (indicate) _____

Research area(s) of particular interest (please check)

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> paleontology | <input type="checkbox"/> reproduction |
| <input type="checkbox"/> ecology | <input type="checkbox"/> larvae |
| <input type="checkbox"/> behavior | <input type="checkbox"/> evolution |
| <input type="checkbox"/> physiology | <input type="checkbox"/> biogeography |
| <input type="checkbox"/> biochemistry | |
| <input type="checkbox"/> embryology, developmental biology | |
| <input type="checkbox"/> systematics | |
| <input type="checkbox"/> anatomy | |
| <input type="checkbox"/> functional morphology | |
| <input type="checkbox"/> other (indicate) _____ | |

Other items for newsletter (requests, notices, suggestions, etc.)
